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Martin Morris

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MARTIN MORRIS

Appeal 2008-0515
Application 09/945,200
Technology Center 2600

Decided: May 21, 2008

Before JOSEPH F. RUGGIERO, ANITA PELLMAN GROSS, and
KEVIN F. TURNER, *Administrative Patent Judges*.

TURNER, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134 from a final rejection of claims 1-6, 8-15, 17-21, and 24-33. We have jurisdiction under 35 U.S.C. § 6(b). We reverse.

STATEMENT OF CASE

Appellant discloses a method and a system for effectively increasing the transmission range of a wireless device. (Spec. [1008]). When one of the wireless devices detects that it is moving out of range of a second device, it applies additional error-correcting coding to messages, thus increasing the message's signal-to-noise ratio. (Spec. [1009]).

Claims 1-6, 8-15, 17-21, and 24-33 are pending in the application.

Independent claim 1 is illustrative:

1 . A wireless communications device for receiving and sending incoming and outgoing transmissions, said transmissions including digitally-encoded data and error-correcting coding for the digitally-encoded data, comprising:

a receiver operable to receive the incoming transmissions;

a transmitter operable to send the outgoing transmissions over a first transmission range; and

an error-correcting coding mechanism operable to vary a level of the error-correcting coding applied to the digitally-encoded data within the outgoing transmissions, such that the first transmission range is effectively increased up to a maximum transmission range corresponding to a maximum level of error-correcting coding,

wherein an access code portion of outgoing transmissions sent by the wireless communications device is reserved to notify a second wireless communications device that the outgoing transmissions have an increased level of error-correcting coding.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Ho	US 2002/0034172 A1	Mar. 21, 2002 (filed Jun. 18, 2001)
Haartsen	US 2002/0187799 A1	Dec. 12, 2002 (filed Jun. 7, 2001)

The Examiner rejected claims 1-6, 8-15, 17-21, and 24-33 under 35 U.S.C. § 103(a) as unpatentable over Haartsen, Ho, and the instant application's disclosed prior art.

Appellant argues that Ho, Haartsen, and the application's allegedly disclosed prior art teach away from their combination, that there would be no actual motivation to combine, and that the specific packet structure recited in the claims is not taught or suggested by the cited references. (App. Br. 5-12). The Examiner finds that the teaching away from the combination supplied by Appellant is insufficient and that the cited sections of the references do not constitute actual teachings that would run counter to the combination. (Ans. 8-16).

Appellant and the Examiner discuss, at length, the nature of the prior art discussed in the Specification, as provided in the Reply Briefs and Supplemental Answer, respectively¹. Only those arguments actually made by Appellant have been considered in this decision. Arguments that Appellant did not make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

ISSUE

Has Appellant shown that the Examiner erred in finding that Haartsen, Ho, and the instant application's disclosed prior art teach or suggest all of the disputed elements recited in independent claims 1, 12, 21, 27, and 30?

FINDINGS OF FACT

1. The application details that wireless devices may operate over a normal, first transmission range, where that range can be expanded, in case

¹ A first Reply Brief was filed December 5, 2006, a Supplemental Answer was mailed February 1, 2007, and a second Reply Brief was filed April 2, 2007.

of movement of one or both wireless devices. This is accomplished through the application of additional error-correcting coding to sent messages, allowing the messages to be decoded at a greater distance from the sending device. A reserved access code portion at the beginning of the message is used to notify the receiving device of the extra coding requirements, where the dedicated inquiry access code (DIAC) is used for such a purpose. (Spec. [1008]-[1010], [1019]-[1021], [1027]-[1031]; Figs. 1A, 1B, 3A and 3B, elements 110, 120, 130, 140, 310, 320, 330, and 340).

2. Independent claims 1, 12, 21, 27, and 30 all contain language that recites that an access code portion or a dedicated access code portion of transmitted data is reserved to notify a second wireless device of an error correction code or an increased level of error-correcting coding.

3. Haartsen discloses a system and a method for allocating resources to a communications channel between a transmitter and a receiver. When the performance of the communication channel degrades, the receiver measures the strength of a communication signal received from the transmitter. If the communication signal strength fails to satisfy a threshold, then the transmitter may increase the transmission power and/or reduce the user rate of the communication link. (Abstract; [0058] and [0061]-[0064]).

4. Ho discloses a medium access control (MAC) protocol for wireless communication that provides a high rate of transport while meeting a desirable Quality of Service (QoS). The frame structure includes an access code field and a PHY header field, where the access code field is used for synchronization and DC offset compensation and the PHY header field

includes a Forward Error Correction (FEC) field. (Abstract; [0020]; Figs. 1A and 1B, elements 102, 104, 114).

5. The Specification details that DIACs “are used to determine whether any Bluetooth device sharing a common characteristic is within transmission range” and “are specially chosen to tolerate a higher bit error rate than a body of a message, such that they can be detected beyond a range at which a Bluetooth transmission would normally be corrupted. This is so that they can achieve their function of being detected by a receiver even before a clock synchronization is achieved between the transmitting and receiving devices.” (Spec. [1017]).

PRINCIPLES OF LAW

The Examiner bears the initial burden of presenting a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). If that burden is met, then the burden shifts to the Appellant to overcome the prima facie case with argument and/or evidence. *In re Mayne*, 104 F.3d 1339, 1342 (Fed. Cir. 1997). “Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734 (2007).

“[A] prior patent must be considered in its entirety, i.e., as a whole, including portions that would lead away from the invention in suit.” *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1568 (Fed.Cir.1987). A

reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant. *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994).

ANALYSIS

Appellant argues that one of ordinary skill in the art would not have combined Haartsen, Ho, and the instant application's disclosed prior art to reach the subject matter in independent claims 1, 12, 21, 27, and 30. Appellant argues that while the present application describes a DIAC, there is no suggestion there or made elsewhere that the DIAC should be used as the Examiner finds in the rejection, i.e. incorporating the FEC therein. (App. Br. 6-7, First Reply Br. 2-5, Second Reply Br. 2-4). In the rejection, the Examiner finds that because the DIACs tolerate a higher bit error rate and can be detected beyond a "normal" transmission range, it would have been obvious to incorporate an FEC value therein. (Ans. 5). The Examiner also finds that a reserved portion, setting the FEC, is found in the DIACs "as stated in the instant application's disclosed prior art (paragraph 1027) and is stated in the rejection above." (Ans. 14). We cannot agree.

Ho makes clear that the FEC field is placed in the PHY header, (FF. 4), and that the PHY header is adjacent to but not part of an access code portion. The Examiner contends that moving the FEC field to an access code portion or a DIAC would occur because it is known that the DIAC tolerates a higher bit error rate and is detected beyond the normal transmission range. We fail to see, however, how this higher error tolerance

or range motivates the placement of the FEC into the access code portion or DIAC. While it could serve as motivation to use a DIAC, it does not suggest the placement of the FEC therein. In other words, the use of the DIAC could increase the range of the transmission, but the FEC change would be understood after the PHY header was received and processed by the receiving device. As such, we do not find that the Examiner has proffered a rationale that supports the combination of the cited references in the rejection.

Additionally, as Appellant has argued, (App. Br. 7-8, First Reply Br. 3-5, Second Reply Br. 3), the disclosed use of the DIAC under the Bluetooth standard is for discovery or detection of other wireless devices. (FF. 5). The Bluetooth standard does not prescribe another use for the DIAC, and Ho and Haartsen fail to disclose any other use. Therefore, given how the DIACs are used in the art, there would need to be some teaching or suggestion that error-correcting information be supplied therein. We find no such teaching or suggestion and find that the obviousness rejection of independent claims 1, 12, 21, 27, and 30 has been made in error.

While Appellant has raised additional arguments, we need not reach those arguments to find the rejection to have been made in error. While Appellant has only argued elements of the independent claims as not being taught or suggested by the cited art, we find the rejections of dependent claims 2-6, 8-11, 13-15, 17-20, and 24-26, 28, 29, and 31-33 to have similarly been made in error.

CONCLUSION OF LAW

We conclude that Appellant has shown that the Examiner erred in rejecting claims 1-6, 8-15, 17-21, and 24-33, and we reverse the Examiner's rejection of those claims under 35 U.S.C. § 103(a).

DECISION

The decision of the Examiner is reversed.

REVERSED

gvw

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